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Attorney Docket: 1830/50325  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**RECEIVED**

Applicant: MASAHIRO IMOTO ET AL.

Serial No.: 09/933,717 / Group Art Unit:

JUL 22 2002

Filed: AUGUST 22, 2001 Examiner:

TECH CENTER 1600/2900

Title: HETEROCYCLIC COMPOUNDS HAVING EFFECT OF  
ACTIVATING NICOTINIC ACETYLCHOLINE ALFA4 BETA2  
RECEPTOR

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §§ 1.97 and 1.98**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

This supplements the Information Disclosure Statement submitted in the above-identified application on December 7, 2001.


In accordance with the duty of disclosure under 37 CFR §1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached Form PTO-1449 and/or listed herein and which the Examiner may deem relevant to patentability of the claims of the above-identified application.

English abstracts of the European patent no. 0268915 and Japanese patent no. 52095666 are submitted herewith. Please note that only the English abstract of Japanese patent no. 63253084 is enclosed.

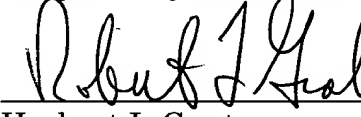
In compliance with the concise explanation requirement under 37 CFR §1.98(a)(3) for foreign language documents, Applicant encloses herewith a copy of a corresponding foreign Search Report citing such documents.

The present Information Disclosure Statement is being filed (1) no later than three months from the application's filing date or (2) before the mailing date of the first Office Action on the merits (whichever is later), and therefore no certification under 37 C.F.R. §1.97(e) or fee under 37 C.F.R. §1.17(p) is required.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

July ~~17~~<sub>19</sub>, 2002 

Respectfully submitted,

  
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FORM PTO-1449

U.S. Department of Commerce  
Patent & Trademark OfficeAttorney Docket No.  
1830/50325Serial No.  
09/933,717**INFORMATION DISCLOSURE  
STATEMENT***(Use several sheets if necessary)*

Applicant: Masahiro IMOTO

Filing Date  
August 22, 2001

Group JUL 22 2002

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**U.S. PATENT DOCUMENTS**

Examiner Initial		Document Number	Date	Name	Class	Sub-Class	Filing Date (if appropriate)
	AA	3933836	01/1976	Yale, et al.			
	AB	5250498	10/1993	Andree, et al.			
	AC	5049558	09/1991	Bradbury, et al.			
	AD	4616025	10/1986	Exer, et al.			
	AE	4873243	10/1989	Wermuth, et al.			
	AF	3998958	12/1976	Rasmussen, et al.			
	AG	4742060	05/1988	Shiokawa, et al.			

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document Number	Date	Name	Class	Sub-Class	TRANSLATION	
							Yes	No
	AH	52095666	11/1977	Japan			Abstract	
	AI	63253084	02/1989	Japan			Abstract Only	
	AJ	0857725	08/1998	Europe				
	AK	0592676	04/1994	Europe				
	AL	0639569	02/1995	Europe				
	AM	0268915	06/1988	Europe			Abstract	
	AN	93/03714	03/1993	WO				
	AO	96/14844	05/1996	WO				

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)**

AP	Lucia COX, et al., "Sorption-desorption of imidacloprid and its metabolites in soils" J. Agric. Food Chem., 1997							
AQ	Rai BANSAL, et al., "Synthesis of New Functionalized Dichlorophosphines: Precursors of Dicoordinated Phosphorus Heterocycles" Tetrahedron Letters, Vol. 32, 1991							
AR	Joshua ROKACH, et al., "Cyclic Amidine Inhibitors of Indolamine N-Methyltransferase" Journal of Medicinal Chemistry, Vol. 22, No. 3, 1979							
AS	Anita MELIKIAN, et al., "Condensation of Muscimol or Thiomuscimol with Aminopyridazines Yields GABA-A Antagonists" J. Med. Chem. Vol. 35, 1992							
AT	Fumiyoshi ISHIKAWA, et al., "Cyclic Guanidines. I. Synthesis of Hypoglycemic 1-Substituted 2-Imino-1,3-diazacycloalkanes" Chem. Pharm. Bulletin, Vol. 26, 1978							

**EXAMINER****DATE CONSIDERED**

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449		U.S. Department of Commerce Patent & Trademark Office		Attorney Docket No. 1830/50325		Serial No. 09/933,717		RECEIVED JUL 22 2002 TECH CENTER 1600/2900	
<b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)				Applicant: Masahiro IMOTO					
				Filing Date August 22, 2001		Group			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)									
AU	D. J. BROWN, et al., "The Dimroth Rearrangement. Part VIII. Rate Enhancement by Electron-withdrawal in Simple Iminopyrimidines" J. Chem. Soc., 1967								
AV	A. J. LAYTON, et al., "Isothiazoles. Part XI. Carbinols, Aryl Ketones and Aminomethyl Derivatives of Isothiazoles" J. Chem. Soc., 1968								
AW	John A. ZOLTEWICZ, et al., "Covalent Amination. Substituent Effects on the Site of Addition of Ammonia to Quaternized Pyridines and Pyrazines" J. Org. Chem., Vol. 41, 1976								
AX	Juergen LIEBSOHER, et al., "Synthesis of Imidazoles by Reaction of N-Benzylated Amindines with Carboxylic Acid Derivatives" J. parkt. Chem., Vol. 330, 1988								
AY	Motohiro TOMIZAWA, et al., "Structure-Activity Relationship of Nicotinoids and Imidacloprid Analogs" J. Pesticide Chem., Vol. 18, 1993								
AZ	Shirley Lee CHAO, et al., "Interaction of Imidacloprid Metabolites and Analogs with the Nicotinic Acetylcholine Receptor of Mouse Brain in Relation to Toxicity" Pesticide Biochemistry and Physiology, Vol. 58, 1997								
BA	Motohiro TOMIZAWA, et al., "Minor structural changes in nicotinoid insecticides confer differential subtype selectivity for mammalian nicotinic acetylcholine receptors" British Journal of Pharmacology, Vol. 127, 1999								
BB	Konstantin KARAGHIOSOFF, et al., "1,4,2-Diazaphospholo[4,5-a]pyridine" Chemistry Science, Vol. 47, 1992								
BC	Alan R. KATRITZKY, et al., "Novel Ring Opening of Aminoheterocycles: Facile Syntheses of <i>w</i> -Alkylaminopentadienenitriles" Department of Chemistry, University of Florida, December 24, 1981								
BD	Wolfgang HANEFELD, et al., "Studies on 1,3-thiazines, XXIII. Novel transformations of tetrahydro-1,3-thiazine-2-thiones by thionyl chloride" Arch. Pharm., Vol. 318, 1985								
BE	Bachir LATLI, et al., "Novel and potent 6-chloro-3-pyridinylmethyl ligands for the.alpha.4.beta.2 neuronal nicotinic acetylcholine receptor" Chemical Abstracts Service, database accession no. 1998:529637								
BF	V. A. KOVTUNENKO, et al., Synthesis of pyrido[1,2-b][2,4]benzodiazepine-6(11H)-imines" Chemical Abstracts, vol. 108, no. 19, May 9, 1988								
BG	European Search Report								
EXAMINER					DATE CONSIDERED				
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.									